

Chapter 6 -The Master Plan

Introduction

The Master Plan is based on an assessment of resources, issues and current uses of the Preserve. This Master Plan has been developed in accordance with the Office of Parks, Recreation and Historic Preservation (OPRHP) Mission Statement and the Preserve’s vision and goals established in Chapter 4.

The Plan sets forth the agency’s long-term vision for capital improvements, rehabilitation and operational enhancements to Minnewaska State Park Preserve (the Preserve) for the next ten to fifteen years. The agency has not developed detailed cost estimates for each of the proposed actions. Cumulatively they will cost tens of millions of dollars to implement. The pace and sequencing of recommended actions will be determined by the availability of funding, balancing the benefits of creating new public amenities against the need to invest in rehabilitation of existing Preserve infrastructure. Moreover, decisions on investments in the Preserve need to be balanced with other pressing needs in the Palisades Region and the entire State Parks system and are dependent upon OPRHP’s annual capital budget. Some actions will be undertaken in the next one to three years; many others will be implemented further in the future as funding becomes available. Some projects are dependent on financial participation from public and private partner organizations.

The Preserve is classified as a Park Preserve under Article 20 of the Parks, Recreation and Historic Preservation Law. The Master Plan development, maintenance and operational strategies identified in this document support and are consistent with this classification. In addition, all land acquisitions made after the adoption of the 1993 Master Plan will be included under the existing classification for Minnewaska as a Park Preserve.

The primary focus of the Master Plan for Minnewaska State Park Preserve is to establish a balance between recreational use and protection and interpretation of the Preserve’s natural and cultural resources. Minnewaska State Park Preserve has the unique distinction of being one of the most naturally significant areas in New York and has significant diversity in its scenic, natural and cultural resources. The recent expansions of the Preserve allow for the enhancement of conservation and recreational opportunities along the Shawangunk Ridge.

The following section takes the preferred Master Plan Alternative identified in the Analysis and Alternatives Chapter and develops it into the Master Plan. The entire Preserve takes form as each element is described and illustrated. Lastly, operations and development priorities for the plan are described. The Preserve’s development ranges from natural areas with no development to developed passive recreation areas for picnicking, hiking, cycling, climbing and enjoying nature.

Classification

Park Preserve

The Preserve will remain classified as a Park Preserve. The Master Plan recommends that the more than 9,000 acres acquired since the 1993 Master Plan be included in the Park Preserve designation. All future properties acquired as part of the Preserve will be included in and managed as a Preserve. Passive recreation opportunities will remain a compatible use within designated areas. Research and education will continue to protect and promote biodiversity, existing and proposed passive recreational activities will be monitored, and impacts will be addressed. See Figure 4 – Park Preservation Designation and Expansion Map.

Infrastructure

Facilities

Preserve Office and Visitor Center

Administration, operations, visitor orientation and environmental education/interpretation will be located in the former Phillips house. The adaptive reuse of this structure as a visitor center will enhance operations, visitor safety, education and interpretation and will facilitate visitor contact with staff. Parking and a visitor drop off area will be provided where the former Preserve office and a former residence exists today. Permanent displays documenting the cultural history of the land will be provided as well as storage for interpretive materials. The visitor center and associated parking will use sustainable design practices and the possibility for LEED (Leadership in Education and Environmental Design) Certification will be explored. See Figure 20 - Preserve Office and Visitor Center.

Lake Minnewaska Area

The redesign of the Lake Minnewaska area will provide an orderly and organized structure for the parking of vehicles. The restroom facilities will be improved. The former Wildmere parking lot will be removed and reclaimed as a picnic area. While natural landscapes will be prevalent within the picnic area, additional maintenance and upkeep is required. See Figure 21 – Lake Minnewaska Area Design.

Main Entrance Area

The new design will improve the operational efficiency and safety of the entrance area. Patrons will have a clear understanding of traffic flow and an ample stacking area will be provided for access to the Preserve during peak demand. Safety issues associated with the significant volume of traffic and congestion at the main entrance will be reduced. The impact to traffic flow on highway 44/55 will be significantly diminished due to the additional stacking room for up to fifty vehicles waiting to enter the Preserve. Staff shall continue to coordinate with Park Police to control congestion along highway. See Figure 22 - Main Entrance and Awosting Lot Design. Pedestrian use will be removed from the roadway and a separate carriage road will be constructed connecting the Awosting Parking Lot to the Sunset Carriage Road.

Awosting Parking Lot

The design of the Awosting parking lot will decrease operational needs. Paving the lots will reduce maintenance needs and striping the parking spaces will reduce the demand on staff to park cars in the currently undefined parking area. Additional maintenance will be required to maintain the aesthetics of the design. See Figure 22 - Main Entrance and Awosting Lot Design.

Maintenance Facility

The existing maintenance facility will be rehabilitated and improved. The roof will be replaced, the dirt floor will be surfaced with concrete and the concrete block walls stabilized. A break room will be constructed inside the existing structure for staff. To screen the facility from public view, a conceptual landscape plan has been created and will be implemented to provide a buffer and visual screen from the parking lots. See Figure 21 - Lake Minnewaska Area Design. A drainage swale will be constructed along the north side of the building to better manage runoff. Enhancements to the maintenance facility will facilitate the daily maintenance activities.

Utilities Improvements

Future utility upgrades will be implemented as outlined in the phasing and implementation plan. Water and sewer shall be sized appropriately based on the anticipated use. A well system will be explored to provide an adequate water supply to the visitor center and proposed restroom in the Lake Minnewaska area. Electrical demands will be determined by the facilities served. Existing power lines and transformers may require upsizing or updating. Phone and internet service shall be evaluated while in the design phase for new or upgraded facilities. Utilities will not be provided or expanded in any part of the Preserve other than the Lake Minnewaska area.

Carriage Roads

The designated uses of the carriage roads will remain the same. Hiking is allowed on all carriage roads; bicycling is allowed on designated carriage roads; cross country skiing is allowed on groomed carriage roads; and snowshoeing is allowed on ungroomed carriage roads. The Carriage Road Maintenance Plan will be implemented and coordination of maintenance and signage efforts will continue to be developed along the Shawangunk Ridge with the Mohonk Preserve. See Appendix B - The Minnewaska State Park Preserve Trails Plan for more detailed information.

Peter's Kill Area

Upon moving the Preserve office to the Lake Minnewaska area, the Peter's Kill office will house Park Police staff and support the Peter's Kill and Dickie Barre climbing areas.

The Peter's Kill area parking lot will be expanded by 20 spaces to serve the expected increase in visitation due to the expansion of climbing within the Dickie Barre area. See Figure 23 - Peter's Kill Area map

Tillson Lake Area

A small gravel boat launch will be constructed in the Tillson Lake area and the existing gravel parking lot will be redefined with additional gravel surfacing. Fishing and boating opportunities will remain.

Stony Kill Falls Area

A trail head parking lot will be added in the Stony Kill Falls to facilitate visitor access to the falls. Fifteen parking spaces will be constructed in a remnant shale quarry and a trail will be constructed to the base of the falls. A second trail will be constructed to provide access to the top of the falls and to connect to the Stony Kill carriage road. See Appendix B – The Minnewaska State Park Preserve Trails Plan.

Landfill

The landfill used in the resort era has been covered with soil for many years but has not been closed as per DEC landfill closure regulations. Before the closure process begins, OPRHP/PIPC will coordinate with SHPO for possible archeological investigation. If archeological investigation is not required, the landfill will be capped and closed, as per DEC regulations, as soon as feasible.

Other Access and Satellite Parking Areas

Access to the Park Preserve will be promoted from the Berme Road Park in Ellenville. Park Preserve trail maps will continue to identify this access point. Access will continue to be allowed from trails leading from Sam's Point Preserve and the Mohonk Preserve. A new trailhead parking lot will be

created to provide access to the former Awosting Reserve trail systems and include parking spaces for cars and equestrian trailers. Smaller satellite parking areas will be enhanced and expanded along Berne Road, Fordmore Road and along Highway 44/55 for the Jenny Lane area.

Shawangunk Gateway Campground

A campground will be constructed on a separate forty-five acre parcel located along Highway Route 299 in the Town of Gardiner, NY. The campground will provide primitive camping only, with a maximum of fifty sites comprised of twenty-six drive-in, and twenty-four walk-in sites. Each site will be restricted to tent camping sited upon tent platforms to be constructed. Three of the drive-in camp sites will meet the standards of the Americans with Disabilities Act (ADA).

The proposed design includes a contact station, constructed near the main entrance to the campground, to provide general information, patron check-in, registration, and a small manager's quarters. A small bathhouse with showers, toilets and laundry facilities will be constructed in this general entrance area, along with a small attached pavilion. A fire ring for patron use will be installed adjacent to this pavilion, since individual campfires at each campsite will be prohibited. Two composting toilet facilities and potable water spigots will be constructed in the tent site areas. Thirty-six paved parking spaces will be constructed adjacent to these two structures. Nearby overflow lawn parking shall accommodate an additional twelve vehicles. The entrance area to the campground and the parking areas adjacent to these structures will be paved, with the remaining campsite roads constructed of shale or a crusher stone material. See Appendix E - Shawangunk Gateway Campground.

Recreation Facility Development and Programs

The 21,000 acre Preserve is a multi-use resource. Visitors can relax and enjoy the natural beauty, or bike, hike, climb, swim or ride their horse in the serene surroundings. Recreational activities at the Preserve include activities compliant with the Park Preserve classification. A description of these recreational activities is provided below. See Figure 19 Conceptual Recreation Use Map.

Trails

The Minnewaska State Park Preserve Trails Plan 2009 (Appendix B) provides guidance for the maintenance of an extensive system of footpaths, carriage roads and mountain bike trails which accommodate a variety of year-round recreational uses and interpretive experiences. Hiking is allowed on all footpaths. Hiking, biking and horseback riding (by permit only) are allowed on all maintained carriage roads throughout the Park Preserve. The short term plan for the Awosting Reserve area will allow hiking, mountain biking and horseback riding on the wood roads as identified in the Trails Plan. Once the single track mountain bike trail system is complete, mountain biking will only be allowed on the single track trail and prohibited from the wood roads. Winter uses include cross-country skiing and snowshoeing on designated trails.

In general, the existing trails system in the Lake Minnewaska and Lake Awosting areas meets the needs of the diversity of trail users while remaining compatible with the resources of the Preserve. Some modifications to the trails system are considered appropriate including designation of trails on recent acquisition properties and developing some re-routes and connector trails to improve visitor circulation and access to resources in the Preserve. Key elements of the plan are summarized below.

Recent acquisition properties

Awosting Reserve

- Develop the looped single track mountain bike trail system.
- Enhance the existing woods roads for hiking and horseback riding.
- Expand parking area along Aumick Road including spaces for horse trailers

Mine Hole Area

- Re-route the Long Path through this area to connect to new parking area along Berme Road
- Designate the Point Lookout Trail
- Further assess potential for trail expansion
- Maintain contact with Ulster County regarding development of the D&H Canal Trail

Re-routes

- Re-route the Scenic Trail to the southeast side of Mud Pond
- Re-route the Long Path through the Mine Hole Area

Connector Trails

- Develop the Power House Trail providing a connection to the Power House and two waterfalls in the Peter's Kill area
- Work with NYS Department of Transportation to develop safe crossings of Route 44/55 to create connections from the Peter's Kill area to the Awosting Falls Carriage Road
- Develop the Stony Kill Falls Trail and the Falls Spur Trail to connect the new parking lot to the top of the ridge and the Stony Kill Carriage Road and to connect to the bottom of the Falls
- Develop the Fire Break Trail (west of the Stony Kill) to connect the Smiley Carriage Road to the Stony Kill Carriage Road and the Stony Kill Falls
- Develop Witch's Cave Trail to provide alternate route between the Awosting parking lot and the Lake Minnewaska area

The Preserve will expand interpretive programming and maintain coordination with volunteer groups for the maintenance of the trails system. The Preserve will continue working with The Nature Conservancy regarding management of footpaths and carriage roads in Sam's Point Preserve.

Newly designated and developed trails will be upgraded to use standards before designation and signage. Efforts will be made to preserve and protect populations of rare and endangered species when considering final alignments of trails. Trail design guidelines are outlined in the Trails Plan. A long-term maintenance and monitoring plan will be developed to ensure the continued sustainability of the trails system.

A thorough conditions assessment of all footpaths and woods roads is scheduled for Spring/Summer 2009. This will be conducted by volunteer efforts under the supervision of OPRHP staff. A follow up report will be provided with recommendations for trail maintenance and projects. The carriage roads underwent a thorough conditions assessment by Barton & Loguidice, P.C. in the fall of 2008 as part of a carriage road restoration project. A final report, expected in 2009, will provide standard construction details for the carriage road system, vegetation and drainage management guidelines, and maintenance standards. This long term restoration project will require significant funding and will be implemented in conjunction with the Mohonk Preserve and Sam's Point Preserve. For more information, see the Final Trails Plan Map (large format insert), and Appendix B – The Minnewaska State Park Preserve Trails Plan.

Rock Climbing

A climbing management plan will be developed for the Preserve indicating areas suitable and unsuitable for rock climbing. One area currently identified as a potentially suitable location for the expansion of rock climbing opportunities is within the Dickie Barre area adjacent to the Peter's Kill climbing area. It has been determined that thirty new climbing routes and twenty to thirty new bouldering opportunities are possible in this area. A trail will be constructed at the base of the cliff face and connect to the existing trail at the top. A cliff face biological survey was conducted and Mountain Spleenwort (*Asplenium montanum*) was identified and recorded at several locations. Impacts will be mitigated through the use of OPRHP staff monitoring and educational efforts. Appropriate signage will be installed to inform users about the sensitive resources and to explain why certain areas are closed to climbing use. This information will be provided in promotional and permitting materials. The climbing management plan will include recent cultural and natural surveys conducted in the Dickie Barre area. See Figure 24 – Peter's Kill and Dickie Barre Areas.

Ice Climbing

Ice climbing is a prohibited activity, due to the safety and operational concerns. This is particularly the case with regard to the capacity of the park to respond to any potential emergency associated with ice climbing.

Swimming

Recreational swimming is currently a regulated activity per OPRHP rules and regulations. The Lake Minnewaska and Lake Awosting beaches are open for use during the summer operating season only and are staffed by lifeguards. Recreational swimming will remain a regulated activity at Minnewaska and be contained to the current designated use zones.

Distance Swimming

Distance swimming is allowed in Lake Minnewaska. The designated swim area is located at the former "Family Beach" area. The Minnewaska Distance Swimmer Association (MDSA) members are permitted to use the area and self regulate their distance swimming within the designated zone. The distance swimming area is available for use to MDSA members only and is subject to the same hours and season as the Lake Minnewaska beach area. MDSA members are allowed to swim only when lifeguards are on duty at the Lake Minnewaska beach.

Scuba Diving

Exploring the depths of Lake Minnewaska requires diving certification and a permit. Dive teams from the local community occasionally offer group diving opportunities. Divers enter Lake Minnewaska from Diver's Cove and are allowed to dive when the lake is ice free. All divers must sign in and out at the main office. Permits issued to divers contain provisions regarding the protection of sensitive natural resources within the lake. In addition, educational materials on these resources are provided to the scuba community.

Picnicking

Picnicking opportunities will be expanded in the Lake Minnewaska area through the relocation and reclamation of the asphalted Wildmere parking lot adjacent to Lake Minnewaska. The parking lot will evolve into a forested picnic grove through natural succession and management. A small picnic area will be constructed adjacent to the Awosting parking lot for those patrons wishing to picnic at this location rather than carry items to the Lake Minnewaska area. This picnic area will be

constructed upon the redesign of the Awosting parking lot. See Figure 22 – Main Entrance and Awosting Lot. Picnicking opportunities at the Cliffhouse picnic area will not expand.

Boating

Non-motorized boats are allowed in Lake Minnewaska with a PIPC boating permit and inspection of the boat. A PIPC permit allows the visitor to boat in all designated boating lakes in the Palisades Region. The designated boat launch location is at Diver’s Cove. Boating is also allowed in Tillson Lake. Electric trolling motors are allowed on Tillson Lake and the designated boat launch area is adjacent to the parking lot.

Hunting

The expansion of deer hunting opportunities at Minnewaska State Park Preserve is a component of the deer management strategies currently being evaluated for the Shawangunk Ridge. These strategies are being evaluated in regard to the protection of the biodiversity of the ridge. OPRHP, DEC and other Ridge partners are working to assess the impacts of deer on biodiversity and the natural communities within the Preserve. Deer management strategies will be developed and implemented based on research and the specific needs of each area. Deer management strategies for the Preserve shall be consistent with the Shawangunk Ridge Biodiversity Partnership (SRBP) deer management strategies. Hunting opportunities will be expanded to the Awosting Reserve area; additional areas for expanded hunting may be considered in the future.

Fishing

To protect and preserve the unique habitat within Lake Minnewaska and Lake Awosting and reduce the introduction of bait fish into the lakes, fishing will be limited to Tillson Lake. A New York State fishing license is required to fish at Tillson Lake. A PIPC boating permit is required to use a boat on the lake. No gas powered motor boats are allowed on Tillson Lake.

Natural Resource Management and Protection

The natural resources of the Preserve constitute one of the most unique ecological systems in the country, as described in Chapter 3. The protection of these resources, while allowing for an extraordinary recreational experience for visitors to the Preserve, is a major goal of the Master Plan. The major guiding principle of the plan is that the major natural areas of the Preserve will be kept in their natural state, to the degree practicable, with a minimum degree of interference and management by man. Management in these areas is limited to those activities critical to safeguarding the health, safety and welfare of patrons, to maintaining the existence of the major ecosystems of the Preserve, or to maintaining existing manmade improvements. Greater flexibility in management is permitted in previously disturbed areas, in the areas where new facilities are proposed, and in selected areas critical to maintaining or restoring significant vistas.

The following policies and measures will be implemented in managing the natural resources of the Preserve:

Landscapes, Plants and Forest Management

Native plant life will be maintained and perpetuated. Removal of trees that constitute a safety hazard will be accomplished consistent with established OPRHP tree management policy. Natural succession will dictate the form of management practice, except where it threatens the existence of specialized species or habitats. Fire management strategies will be developed, implemented and coordinated with other partners along the Shawangunk Ridge.

Invasive Species Management

Invasive species within the Preserve is a significant threat that will continue to be monitored and controlled to protect the significant natural communities. The Minnewaska State Park Preserve Invasive Species Management Plan shall continue to be implemented and invasive species control efforts shall continue.

Wildlife Management

Deer management strategies will be developed with DEC and be based on the needs of biodiversity enhancement. The extent of wildlife management will be established on the basis of the future requirements of the Preserve and be based on maintaining balanced ecological conditions. The management of other types of wildlife is not required at this time and shall be addressed as needed.

Fire Management

A Fire Management Plan for the Shawangunk Ridge is currently being prepared by the Shawangunk Ridge Biodiversity Partnership of which State Parks is a member. State Parks has adopted a Fire Management Policy statement which allows for agency participation in region-wide fire management plans. The development of the ridge fire management plan is supported by OPRHP and will be implemented within the Preserve to protect and enhance biodiversity. The plan will address the benefits that occur from prescribed burning and management of wildfires, such as enhanced biodiversity and reduction of fuel loads. The Preserve will work closely with SRBP and TNC staff in the development of the plan and the coordination of fire management strategies.

Cooperation in Regional Planning Efforts

Efforts will continue in the management of the biological resources of the entire Shawangunk Ridge. Partnerships with groups that support, enhance and protect these biological resources, such as the Shawangunk Ridge Biodiversity Partnership, The Mohonk Preserve and Sam's Point Preserve, shall continue. OPRHP will work with the Partnership on ridge-wide planning for the management of the significant resources on the ridge. Transportation enhancements and strategies are supported to encourage the sustainable practice of mass transportation and multiple occupancy vehicles. Shuttle busses, a bus stop at the Preserve, and the connection to adjacent pedestrian corridors are ideas that will be pursued.

Water Resource Management

Surface and ground water quality will be maintained at levels consistent with applicable New York State and Federal water quality standards. Stormwater filtration or reuse shall be considered in the design of parking lots and structures. Adequate water supply will be provided for the proposed uses identified in the Master Plan.

Drinking Water Treatment

Potable water will meet New York State Department of Health and Department of Environmental Conservation standards to ensure the safety of employees and patrons. Filtration and/or treatment will be provided consistent with federal and New York State Department of Health requirements.

Air Quality

State and National Ambient Air Quality Standards will be maintained. (DEC 2009)

Noise

Noise levels will be consistent with the natural setting and uses therein. Necessary enforcement will be provided to maintain noise levels compatible with the character of the Preserve. Air traffic patterns from Stewart International Airport shall be monitored. Significant increases in noise within the Preserve from airline traffic shall be addressed by OPRHP/PIPC.

Artificial Light

Artificial lighting used in the Preserve will be designed and located to limit intrusion into the undeveloped areas.

Geologic and Soils Management

Unique geologic features and fragile soils will be protected through proper controls. Appropriate erosion control techniques shall be used on all construction projects. Proper stormwater management techniques shall reduce erosion. Sustainable trail construction and maintenance techniques shall be implemented for all trail projects.

Designations

Natural Heritage Areas

Minnewaska State Park Preserve, with the exception of the Tillson Lake Area, will be designated a Natural Heritage Area. As noted in Chapter 5, Minnewaska State Park Preserve has both significant ecological communities and rare and threatened flora and fauna that are significant both statewide and globally. The designation of the Preserve as a Natural Heritage Area is consistent with the vision and goals of the Preserve. Such designation will guide future management, operation and recreational use decisions while furthering the protection of this significant resource.

Bird Conservation Areas

The Master Plan includes all lands acquired after 2006 into the existing Bird Conservation Area (BCA) with the exception of the Shaft 2A area adjacent to Stony Kill Falls and a small disjunct parcel north of the Preserve. The proposed additions to the BCA represent similar habitat to that found within the existing BCA. Chestnut oak forest, classified as a significant natural community, comprises the majority of the proposed additions. These parcels will provide additional high-quality habitat for forest-interior bird species for both breeding and migration. Generally, the proposed additions are recent acquisitions that are adjacent to existing land owned by PIPC and currently designated BCA land, and represent similar habitat. The expansion of the BCA will further the protection of the sensitive bird habitat found within the Preserve. See Figure 5 – Bird Conservation Area Map and Appendix G – BCA Management Guidance Summary.

Cultural Resource Protection

The analysis of the impacts on historic resources within the Preserve is described under the preferred master plan alternative. A Phase 1A cultural study was conducted as part of the 1993 Master Plan as well as a recent walk through review of all buildings by the Office of Parks, Recreation and Historic Preservation Field Services Bureau. Further assessment is recommended concerning certain key structures. Study and consultation prior to any capital projects will assure that the implementation of the plan will not result in any adverse impacts to historic resources in the Preserve. The Master Plan calls for the removal of numerous small unused buildings which remain throughout the Preserve. The structures proposed for removal are identified in Figure 18 – Building Inventory map. A

preliminary evaluation of the significance of these structures has been conducted. Many smaller vacant utilitarian structures have been reviewed and approved for demolition. Other larger structures such as the Lake House; the power house; the Aumick farmstead and outbuildings; and the Club House have been recommended for further evaluation, stabilization and preservation/demolition. The Aumick farmstead and the Lake House will be considered for the possible in a resident curator program. If this adaptive reuse is not an option within two years, Preserve staff shall coordinate with the Field Services Bureau for their photo documentation and removal. See Figure 14 - Sensitive Archeological Areas and Cultural Resource Map for the location of these structures.

Cultural Resources

Previous analysis and assessment of the archaeological resources throughout the Preserve indicate the presence of prehistoric cultural resources. All proposed projects shall have additional reviews to determine if there will be potential impacts to cultural resources. Previously disturbed areas associated with the resort era may be considered culturally significant and shall be reviewed by Preserve/Regional staff and OPRHP's Historic Preservation Field Services Bureau. The Master Plan offers the following recommendations.

Main Entrance Road and Awosting Parking Lot

The proposed parking lot will be built almost entirely within the disturbed area occupied by the existing lot. The entrance road project and any new ground disturbance associated with the parking lot and entrance road will receive site specific review in order to evaluate impacts to cultural resources.

Dickie Barre Climbing Area

The implementation of this project will require an additional field evaluation of prehistoric shelter sites. Findings from such evaluations will be taken into consideration in the development of final plans for the climbing route and trail network. The Dickie Barre area will be included in the 2010 update to the Climbing Management Plan.

The Shawangunk Gateway Campground

The Shawangunk Gateway Campground project is currently in the design phase. This project had a field evaluation for prehistoric and cultural resources as a component of the consultant design. No significant prehistoric or cultural resources were found on the property.

Preserve Office and Visitor Center

The main Preserve office and visitor center will be located in the former Phillips residence atop the cliffs overlooking Lake Minnewaska. The interior of the structure will be reconfigured from its use as a private residence to a functional public space and office space. Sustainable design practices will be implemented within this structure with and LEED Certification is anticipated.

Carriage Roads

The carriage roads throughout the Preserve are National Register eligible and, as such, will be treated with care. Maintenance and repair will be coordinated through the Carriage Road Maintenance Plan and be will conscientious of the historic nature of these roads. Upon major repair, proven, more modern products or construction techniques may be used provided they are not visible to the public.

The Stable

The stable is associated with the carriage road system and is National Register eligible. This large structure, located near Lake Minnewaska, will function as a support facility for the Preserve office and visitor center. The building is highly intact; however roof rehabilitation is needed to preserve the integrity of the structure. The building will be secured and eventually put in to active use to support operational, education, and/or recreational needs.

Historic Vistas

Several historic vistas exist throughout the Preserve which have since become obstructed by vegetation. The Master Plan recommends the selective restoration of historic vistas following a site specific analysis of habitat and species impacts. If impacts are deemed minimal, the selective trimming or removal of certain trees will begin. The restoration of historic vistas will take place in phases over several years.

Landfill

The resort era landfill contains fragments and waste dating back though time of use. In advance of the landfill closure, OPRHP staff shall coordinate with the SHPO for any archeological investigations. Significant items that may be found shall be considered for use in visitor center exhibits and programs.

Cliff House Site

A small gazebo is proposed along the cliff edge overlooking Lake Minnewaska. The proposed site, scale and design of the gazebo shall be reminiscent of a previous gazebo structure at this location. The site is a scenic picnic area overlooking the Wallkill Valley and Lake Minnewaska. No other improvements are planned for the Cliff House site.

Wildmere Site

The site of the Wildmere hotel relates directly to the resort era and is deemed historically significant. The current asphalt parking lot will be removed and will be left to naturalize into a forested picnic grove. A new flush restroom facility is proposed adjacent to the Wildmere hotel site. This facility, and the associated wastewater treatment system, will undergo site specific review to evaluate any potential impacts to cultural resources.

The Power House

This historic hydroelectric plant complex is National Register Eligible. It will be stabilized and interpreted and the mechanics on the interior of the structure will be protected from patron exploration or vandalism as best as possible. FSB will be consulted for assistance on the protection of this significant cultural resource. The sluiceway connecting the dam to the power house will be left without maintenance or repair. If it is determined that the sluiceway poses a safety hazard, simple stabilization should be attempted in the affected areas. If this is not possible, the removal of the members is recommended, after consultation with FSB. Stabilization and interpretation for the power house includes the following items.

- The dam at the crest of the falls will be removed if serious structural, environmental or safety issues are found. OPRHP/PIPC will conduct a structural investigation and submit to FSB with recommendations.

- The sluiceway from the dam to the Power House is largely intact. It shall be left in without maintenance or repair. If it is determined that the sluiceway elements (wooden piers, metal pipes, etc.) are hazardous, simple stabilization will be attempted in the affected areas
- The stone power house, while missing its roof, has walls, entry bridge and interior equipment that are largely intact. This structure will be stabilized and secured from vandalism with consultation from FSB.
- An interpretive trail will be constructed connecting to the Peters' Kill office to encourage public access and education.
- The entire power house complex shall be photographically documented.

Camp Laurel Cabins

If an adaptive reuse of these two structures can not be found within two years of the adoption of this Master Plan, Preserve staff shall work with FSB to document and remove the structures. Sustainable demolition and material reuse practices shall be considered if these structures are removed.

The Former Phillips Cabin

This cabin is in major disrepair with significant deterioration to the roof and floor. FSB, upon preliminary investigation, has determined this structure should be photo documented and removed to protect the safety of park patrons.

The Lake House

The Lake House is a National Register eligible two-story house. The house's sound condition, size, and easy access from public roads would make this building an ideal candidate for a potential "resident curator" program should New York State OPRHP create that program. For the immediate future, the structure will be "mothballed" by sealing windows and doors with appropriate ventilation and ensuring that the roof and exterior are watertight. It will be placed on a monthly inspection program to check condition and effectiveness of the exterior envelope. FSB shall coordinate with the Preserve Manager and Region upon the creation of a resident curator program. If a resident curator program is not created within 2 years, Preserve staff shall coordinate with FSB to photo document and remove structure.

Aumick Farmhouse Structures

This complex of buildings, located in the Awosting Reserve, including the main house, outbuilding, barn, stone piers and other features, is National Register eligible for its representation of historic uses of the Preserve prior to the recreational uses of the later 19th century. The main house, while currently having a "rustic" appearance possibly dating from the early 20th century has, as its core, an early to mid 19th century farmhouse. The barn, while having later exterior materials, is a highly intact example of the English threshing barn form that was the predominant form in early 19th century America and the Hudson Valley. The farmhouse will be stabilized, the issues with the sills will be addressed and secured, and the roof will be repaired to prevent further deterioration. The entire complex will be secured from vandalism and mothballed for potential use in a resident curator program¹. The structure will then be placed on a monthly inspection program to check condition and

¹ A resident curator program is one in which OPRHP inventories historic properties that it owns but has no use for, and leases them to people who agree to invest in their rehabilitation and ongoing upkeep. The intent is to attract private investment into state-owned historic properties, ensuring that these pieces of New York State's history are not lost, but have an active life for the foreseeable future. The main focus of this type of program in the Preserve would be on the

effectiveness of the exterior envelope. FSB will be consulted for approved mothballing practices. FSB shall coordinate with the Preserve manager and Regional Office upon the creation of a resident curator program. If a resident curator program is not created within 2 years, Preserve staff shall coordinate with FSB to photo document and remove the structure.

Archaeological sites

The Preserve contains numerous archaeological sites ranging from prehistoric rock shelters to historic farmsteads, milling sites, and resort related sites. All of these sites are capable of producing artifacts that can provide clues to the history of the area and how humans have utilized the landscape. Areas of high probability for archaeological sites shall be protected from development; prior to any future development an archeological investigation shall be performed prior to ground disturbance. Upon significant findings, development plans may need to be modified. The Master Plan recommends an updated phase 1A cultural survey be conducted on the entire Preserve. This will incorporate information gathered from the phase 1A survey conducted during the 1993 planning process. The updated phase 1A survey shall focus on land acquired after 1993. See Figure 13 – Sensitive Archeological Areas and Cultural Resource for areas which may require further archeological investigation.

The archaeological sites within the Preserve represent a fragile resources and the removal of artifacts often leads to damage to the scientific and historic value of the site. New York State recognized this long ago and enacted Section 233 of the State Education Law in 1958 to help prevent such losses. This legislation was designed to protect "publicly owned" cultural resources "both for scientific and for educational and historic purposes" and represents the interests of all the people of New York in their common heritage and protects their rights to benefit from the scientific and educational values preserved in these resources for all time to come (NYSM website <http://www.nysm.nysed.gov/services/srvpermits.html>.) Under Section 233, all archaeological items are considered the property of New York State and the care and preservation of such items is delegated to the New York State Museum (NYSM). Anyone wishing to excavate a known archaeological site on state property must apply for a Section 233 permit from the NYSM. The law also requires that anyone who identifies a previously unknown site should report it to the appropriate persons. Section 233 provides a framework for helping staff to understand issues relating to archaeological sites within the Preserve and an outline for addressing a number of issues that might arise. In order to comply with Section 233 and to enhance the Preserve's ability to protect and interpret archaeological sites, the following should be implemented.

- All staff should be made aware of the potential for historic resources and reporting requirements should they identify a resource or be informed of such identification by visitors.
 - Staff should be made aware that they should not collect any artifacts unless there is a strong potential that such artifacts will be lost.
 - The location of any such sites should be accurately recorded as soon as possible.
- The Preserve should establish a protocol that identifies who will be responsible for receiving such reports, and passing the information on to the Field Services Bureau for inclusion in the

historic residential structures with good private access and located away from public use areas. The lessee would agree, under contract, to rehabilitate the building within a certain number of years. All work would be reviewed by the Historic Preservation Field Services Bureau to ensure that the structure's historic character is not lost or compromised in the process.

statewide inventory of archaeological sites, and to the NYSM if it appears that there is a collection in need of curation.

- If significant artifacts must be collected for their protection, the NYSM should be contacted about long term curation. While Section 233 delegates the care and preservation of such items to the NYSM, it is capable of developing agreements with local repositories, where appropriate, allowing items to remain more easily accessible to local staff and visitors. For example, the Trailside Museum at Bear Mountain State Park has an agreement with the NYSM.
- If any work is needed at a known archaeological site, including excavation of the site for purely scientific research purposes, or as part of construction project, an application for a Section 233 Permit should be made to the NYSM.
- If evidence for unauthorized excavation or removal of artifacts from a site is identified, staff should contact Park Police to investigate and to determine what actions would be appropriate. NYSM and FSB should also be advised so that information can be added to their records regarding the site(s).

Operations

Safety and Security

- The safety and security of Preserve staff and visitors is maintained by permanent and seasonal staff with support from Park Police. Increased use of the facility and development of the supporting campground facility may result in increased demands on available staff. Many of existing and proposed uses for the Preserve pose inherent risks. Policies concerning safety and security are described below.
- Signage at contact stations or Preserve entrances and roadway or trail entrances will be erected containing language warning of potential risks and providing emergency contact information. Since roadways, trails and overlooks throughout the Preserve are adjacent to steep descents and cliffs, extreme caution must be exercised in all areas.
- Brochures with maps will provide information on footpaths and carriage roads to assist with visitor orientation. Emergency contact information will be provided for such materials.
- Preserve staff, in particular Park Police and Rangers, will be given specialized training concerning the liability issues related to the management of rock climbing activities, in addition to training in first aid and rescue.

Maintenance

- An upgraded, systematic program of carriage road maintenance will be initiated per the Carriage Road Maintenance Plan and carried out in accordance with the design guidelines. On-site shale will continue to be the principal material used for carriageway maintenance, but may be supplemented with off-site material. Application will continue to be made to DEC for a mining permit to increase the amount of shale that can be mined from on-site shale pits, including shale pits in the Awosting Reserve area.
- Least-toxic methods and materials will be used wherever possible in maintenance and operation of the Preserve.
- While not frequent, maintenance may require the use and handling of potentially hazardous materials, such as herbicides, for the control of certain types of invasive species. Staff or contractors will be trained or certified in the proper handling and use of such materials.
- The amount of toxic materials kept in inventory at the Preserve will be no greater than that required for use in the immediate calendar year. Use, storage and disposal of toxic and hazardous

materials shall conform to approved DEC and United States Environmental Protection Agency procedures and requirements.

- Necessary staff will be educated in the ecology of the Preserve, including the vegetation, wildlife and hydrology to increase their knowledge of the potential impacts of their actions, and to improve their understanding of maintenance goals and techniques.
- Trails will continue to be maintained by volunteer staff as this service remains available and is acceptable. Leadership and guidance of volunteers shall be coordinated by Preserve staff. Volunteer staff shall be educated in OPRHP standard trail maintenance techniques and approved safety guidelines. See Appendix B, The Minnewaska State Park Preserve Trails Plan.
- Necessary trimming and clearing of vegetation will be conducted to maintain and restore carriage roads and significant existing and historic vistas. Trimming and clearing will be consistent with clearing performance standards described in the Trails Plan.
- Lowest impact maintenance techniques will be explored such as smaller and lighter vehicles, use of non-motorized transport, alternative fuels, and mowing schedules.
- The Preserve is in need of additional maintenance equipment to perform the required maintenance particularly for the carriage road network.

Equipment Needs

The Preserve has equipment maintenance and replacement needs such as trail grooming equipment, vehicles and tools. Special equipment is needed at the Preserve to address such items as carriage road maintenance, significant invasive species control needs, fire management, and search and rescue. Equipment needs are addressed through the budget assessment process for the Palisades Interstate Park Commission

Fee Collection

Entrance fees are collected from most vehicles entering the Preserve. Special use fees are collected for those desiring to ski during the winter season. Special use fees are required for equestrian activities, rock climbing, and scuba diving. The implementation and collection of fees in the Preserve shall be consistent with general policies established by OPRHP.

Solid Waste Management

Solid waste management includes the collection and disposal of both hazardous and non-hazardous materials from facility operations, including litter resulting from visitor use. Past disposal practices during operation of the privately-held resorts at Lake Minnewaska did not necessarily conform to current best management practices required by the DEC. A landfill developed during the period of private ownership remains on-site but has not been formally closed or reclaimed in accordance with New York State Solid Waste Management regulations. The following policies will be implemented for the control, collection and disposal of solid waste.

- The amount of solid waste generated at the Preserve will be minimized by continuation of the carry-in/carry-out program and recycling program.
- Coordination with local municipalities will be carried out to determine the most economical and environmentally-sensitive means for the disposal of collected wastes. There will be no on site disposal of solid waste other than natural debris.
- The Preserve will promote the use of biodegradable materials.
- The former resort era solid waste disposal site will be formally closed and the land reclaimed, according to the 6NYCRR Part 360.

- Incineration as a means for disposal of solid waste such as branches, leaves and grass clippings will only be used when there is no other reasonable and prudent alternative.
- The disposal of hazardous wastes will comply with all DEC and United States Environmental Protection Agency requirements.

Interpretive Programs

The Preserve is dedicated to providing high quality environmental and cultural education and interpretation for the public. This programming is designed to enhance knowledge and appreciation of the cultural and natural resources of the Preserve and hopefully, to advance an empathetic land use ethic of stewardship and historic preservation.

Cultural Education and Interpretation

Numerous cultural education programs are currently offered for the public year-round. These programs generally include a walking tour of significant sites in the Preserve, such as the former location of the hotels. Other topics of interest include the history of the berry pickers, Native American culture and the former millstone industry. The Master Plan recommends continuing the current cultural education programming with possible expansion upon the construction of the visitor center.

Additional programming can include the architecture and archeology of the Wildmere and Cliff house hotels, an exploration of the Smiley's naturalist ethic and its connection to current land use policies in the Preserve, self-guided tours of key sites of cultural interest with an accompanying trail guide, and further development of existing trail-based tours.

Environmental Education and Interpretation (EE&I)

Current environmental education and interpretation programming takes place on the existing trails and carriageways and in the Nature Center. Such programming is offered to various audiences ranging from school groups and clubs, to pre-school children with parents, and senior citizens. Topics of interest include the unique geology of the Shawangunk Ridge and the rare plant communities and wildlife of the Preserve. Guest educators provide live animal demonstrations and other topics of interest.

It is the goal of the environmental education and interpretation program to increase environmental awareness and to foster a sense of environmental stewardship in Preserve patrons through hands-on interpretive programming. As a destination for nearby metropolitan residents, this audience of patrons includes a significantly large body of individuals who may not otherwise be exposed to this type of education. Through education and interpretation, visitors will come to a better understanding and appreciation of the resources of the Preserve. This will ultimately encourage these visitors to take actions that will contribute to the continued preservation of the natural world.

Future programming will focus on current topics of interest to the public including but not limited to climate change, sustainability, fire ecology, invasive species and species diversity. Educational programs designed for school groups will continue to be designed to meet New York State Learning Standards. The EE&I staff is also seeking to expand audiences for programming and plans to target niche user groups including home-schooled, after school students, developmentally disabled citizens, retirees, mobility impaired users, and nursing homes. Examples of other possible new programming include the educational/recreational large event, such as a winter festival or Earth Day event and new education series, such as an art in the park series.

Interpretation

Interpretation plans include the development of interpretive signage and brochures for the carriage roads and trails near the Lake Minnewaska area. Materials and standards used shall allow patrons of all ranges of mobility and ability to make educated decisions about which trails to utilize. In addition, brochures, nature center displays, educational kiosks with interpretive signs, internet-based interactive maps, videos and other interpretive tools will continue to be developed in order to support the environmental and cultural education programming within the Preserve.

Environmental Education

The Preserve office and visitor center will contain spaces for educational displays and environmental education and interpretation needs including a teaching/demonstration room, offices for Environmental Education & Interpretation (EE&I) staff and storage facilities for educational materials. It is recommended the visitor center remain open for scheduled education programs year-round.

This facility will need an adjacent area for buses to load and unload school groups. A covered outdoor teaching area able to accommodate groups of at least fifty people will be constructed. This area shall be open to the public even when the visitor center is not open and include outdoor interpretive exhibits and dispensers for interpretive materials such as brochures and maps.

Staffing

Staffing is an important element of the implementation of the Master Plan. Current staffing needs at the Preserve will be addressed through the agency's statewide critical fill evaluation process. New programs and facilities will be based on future needs and demands. Staffing for these programs will necessarily be based on the availability of funding resources.

Implementation

The Master Plan presents a long-term vision for the rehabilitation and construction of improvements to the Preserve. The Plan identifies short term (5-10 years) capital improvements of approximately \$5 million. The pacing of the Master Plan implementation will depend on the availability of capital funds to advance the proposed improvements, which need to be sequenced with other pressing capital investments in the Palisades Region and across the entire New York State Park system. Full implementation of the plan will require at least ten years.

The monitoring, progress and implementation of the Minnewaska State Park Preserve Master Plan is the responsibility of both OPRHP/PIPC. Components identified within phases below are not further prioritized and will be completed as funding or resources become available. Included in the list below are items which shall be addressed.

- Plan components shall be incorporated into the annual operating plans and budgets for the Park Preserve.
- Progress toward implementing the Plan requirements shall be monitored annually.
- The annual plan status report shall identify the necessary steps needed to expedite the implementation of the Plan.
- Implementation of the Plan will include the removal of unused infrastructure and restoration of disturbed areas not scheduled for development.

Table 10 – Implementation Priority List

Priority 1	Description/Development Component
	<ul style="list-style-type: none"> • Complete the design and construction of the Preserve office and visitor center including an initial assessment of water and sewer capacities, electrical and phone/internet requirements and parking area. Evaluate the existing septic field system of the former Preserve office to determine if it can be used in the interim for the Preserve office.
	<ul style="list-style-type: none"> • Complete the design and construction of the Lake Minnewaska entrance area reconfiguration.
	<ul style="list-style-type: none"> • Complete the design and construction of restroom facilities in the Lake Minnewaska picnic area to include potable water, flush toilets, heat, water, electric and sewer systems; the construction of a water plant, if needed, including piping from the lake or construction of a well if quantity and quality are supported; construction of waste water plant, including a new sewer collection system from the visitor center and restrooms to the waste water treatment plant.
	<ul style="list-style-type: none"> • Advance the implementation of the historic carriage road restoration project to the next phase of design and engineering and begin rehabilitation of carriage roads.
	<ul style="list-style-type: none"> • Rehabilitate the existing maintenance facility.
	<ul style="list-style-type: none"> • Repair the Lower Awosting Causeway (75% FEMA Reimbursement).
	<ul style="list-style-type: none"> • Complete the design of the Shawangunk Gateway Campground.
	<ul style="list-style-type: none"> • Implement the Trails Plan recommendations for the Mine Hole and the Awosting areas using volunteer labor.
	<ul style="list-style-type: none"> • Implement the Shawangunk Ridge Fire Management Plan.
	<ul style="list-style-type: none"> • Continue implementation of the Invasive Species Management Plan.
	<ul style="list-style-type: none"> • Implement the Shawangunk Ridge deer management strategies.
	<ul style="list-style-type: none"> • Improve interpretive kiosks and trail head signage.
	<ul style="list-style-type: none"> • Begin the restoration of historic vistas.
	<ul style="list-style-type: none"> • Facilitate the creation of a Friends group and develop partnerships with user groups.
	<ul style="list-style-type: none"> • Pave and improved the drainage of the main entrance road.
	<ul style="list-style-type: none"> • Initiate the design of the Stony Kill Falls area.
	<ul style="list-style-type: none"> • Re-establish a satellite Park Police base.
	<ul style="list-style-type: none"> • Develop a climbing management plan for the Park Preserve.
	<ul style="list-style-type: none"> • Construct the Shawangunk Gateway Campground.
Priority 2	Description/Development Component
	<ul style="list-style-type: none"> • Pave and improve drainage at the Peter’s Kill parking area.
	<ul style="list-style-type: none"> • Complete the ongoing rehabilitation of Lake Avenue.
	<ul style="list-style-type: none"> • Initiate the design development for the Tillson Lake dam (Study Phase).
	<ul style="list-style-type: none"> • Complete landscape plan at the Peter’s Kill parking area.
	<ul style="list-style-type: none"> • Demolish and remove the old utility overhead lines/poles.

<ul style="list-style-type: none"> • Stabilize the stable to prevent further deterioration.
<ul style="list-style-type: none"> • Advance implementation of the historic carriage road restoration project to next phase of design, engineering and rehabilitation.
<ul style="list-style-type: none"> • Install appropriate drainage at the shale mine at the old log mill site.
<ul style="list-style-type: none"> • Complete closure of resort era landfill.
<ul style="list-style-type: none"> • Rehabilitate the existing historic gazebo.
<ul style="list-style-type: none"> • Initiate the design of the Awosting parking lot.
<ul style="list-style-type: none"> • Remove unwanted structures.
<ul style="list-style-type: none"> • Enhance the accessibility of the Beacon Hill Carriageway.
<ul style="list-style-type: none"> • Initiate the redesign of the parking lots near Lake Minnewaska including across from the maintenance garage.
<ul style="list-style-type: none"> • Improve maintenance garage screening, landscaping and employee parking area.
<ul style="list-style-type: none"> • Pave parking and expand lot at the tennis court lot.
<ul style="list-style-type: none"> • Continue carriage road restoration.
<ul style="list-style-type: none"> • Reclaim the Wildmere parking lot including its removal.
<ul style="list-style-type: none"> • Conduct boundary survey of the Tillson Lake area to address encroachment issues.
<ul style="list-style-type: none"> • Conduct necessary repairs to Tillson lake dam.
<ul style="list-style-type: none"> • Stabilize and interpret the Power House.
<ul style="list-style-type: none"> • Reconstruct up to five historic gazebos.
<ul style="list-style-type: none"> • Rehabilitate the stable for operational needs.
<ul style="list-style-type: none"> • Improve Jenny Lane parking area.
<ul style="list-style-type: none"> • Improve the Tillson Lake parking area and boat launch.
<ul style="list-style-type: none"> • Remove the concrete dam structure on the Peter’s Kill.
<ul style="list-style-type: none"> • Remove the old pump house at Lake Awosting.
<ul style="list-style-type: none"> • Install benches around Lake Minnewaska.
<ul style="list-style-type: none"> • Construct storage facility and maintenance structure for the Awosting Reserve and the Tillson Lake area.
<ul style="list-style-type: none"> • Expand the parking at the resort era landfill site for visitor center.
<ul style="list-style-type: none"> • Implement the parking design for the Awosting parking lot.
<ul style="list-style-type: none"> • Conduct a boundary survey for the Tillson Lake area.
<ul style="list-style-type: none"> • Conduct a complete boundary survey for the entire Preserve.
<ul style="list-style-type: none"> • Expand parking by twenty spaces if needed in the Peter’s Kill area.
<ul style="list-style-type: none"> • Stabilize or remove the Lake House and Aumick farmhouse upon operational needs.
<ul style="list-style-type: none"> • Renovate the Club House at Tillson Lake.

Plantings and Tree Preservation

Implementation of the Master Plan will entail preservation of existing vegetation as well as restoration and new landscaping in key areas. A clear goal of the plan is to preserve the natural native landscape. New development in the Preserve is predominantly located in areas that have been previously disturbed by human development. Although preservation of existing plants is desirable, it

is inevitable that in some cases a minor loss of existing material will occur during construction or along the edges of these areas. Using native species of plant material that is compatible with the natural character of Minnewaska is imperative.

Sustainability

As part of the OPRHP sustainability initiative, “green” technologies and environmentally sensitive recommendations remain consistent throughout the master planning process. Strategies to reduce greenhouse gas emissions, waste, and energy usage have been analyzed. Recommendations are provided throughout Chapter 5. The list below highlights some of the sustainable initiatives proposed in the Master Plan.

- Visitor Center - The adaptive reuse of the former Phillips house as a visitor center with the use of green technologies, natural lighting, environmentally friendly products and construction practices during the renovation of the structure. LEED Certification will be considered during the renovation.
- Maintenance facility - The reuse and rehabilitation of the existing maintenance facility will reduce landfill waste and disturbance to additional land, in comparison to constructing a new facility as recommended by the previous Master Plan. Green technologies will be considered during the rehabilitation and improvements to this facility. Additionally, photovoltaic (solar) panels will be considered for the roof to supply power to key structures in the area. Education and interpretation will promote this feature.
- Historic Structures - The adaptive reuse of existing historic structures will be considered. If demolition is deemed necessary, staff will investigate sustainable demolition practices with the consideration for reuse/storage of reusable or historic materials.
- Parking Lots – All parking lot designs will consider the use of green infrastructure -- such as rain gardens and grassy swales -- for storm water management and filtration. Tree and shrub plantings will provide shade for cars during hot days, reducing the need for air conditioning and absorbing carbon dioxide from vehicle exhaust.
- Vehicles and equipment – Alternative fueled and energy efficient vehicles and equipment will be considered upon replacement or purchase.
- Energy Consumption – Energy consumption will be reduced through the use of lighting upgrades, programmable thermostats, occupancy motion sensors and other efficient, green technologies and sustainable practices. The use of energy efficient products and the consolidation of travel are recommended.
- Maintenance – The use of alternative fueled equipment and alternatives fuels such as solar, electric and propane fueled equipment and bio-based products (including soy based chain-saw oil and biodegradable products); the proper storage and disposal of chemicals and fuels; limiting the storage of chemicals on site to the quantity which can be used in one year; and proper clean-up of spills; shall all remain a high priority for the Preserve maintenance staff. The recycling of used oils, batteries and metal will be continued.
- Trails – Sustainable trail construction practices will be constructed to reduce erosion due to water run off and the need for maintenance.
- Safety and security – Park Ranger bicycle usage on the carriage roads will be utilized for patrols when appropriate.
- Education – Staff will educate visitors on the Preserve’s sustainable design features. Interpretive panels and displays will be included in the visitor center to educate visitors on what they can do to lead a more sustainable lifestyle.

- Waste disposal – The Carry in/Carry out Policy will remain in place. Visitors will continue to be educated on the policy and be encouraged to participate in solid waste reduction and recycling programs. Signage will be considered to encourage visitors to recycle. Preserve staff will continue recycling in the Preserve office.
- Water – Water usage reduction practices are currently in place and will remain a priority for the Preserve. Composting toilets and waterless urinals are currently used with the inclusion of two new composting restrooms in 2009. Water usage reduction and reuse techniques will be considered in all development within the Preserve.
- Wastewater – Waste water is minimized through the use of composting toilets and waterless urinals. Wastewater from the Preserve office and visitor center and a proposed flush restroom in the Lake Minnewaska picnic area will be filtered by a septic leach field which will be constructed near the maintenance facility.
- Mass Transit/Connectivity – It is recommended that staff pursue discussions with the Ulster County Transit Authority to provide a shuttle service to the Preserve during the days of high use. A bus stop at the Preserve is also a consideration which enhances the connectivity to the surrounding communities and will reduce the greenhouse gas emissions and congestion created by multiple vehicles accessing the Preserve. Trail and carriage road connections to the surrounding communities will be promoted and enhanced to reduce vehicle usage.
- Vegetation - Grass mowing will be assessed and reduced to the fullest extent practical. Native plantings will be used to reduce water and maintenance needs. Storm water management such as rain gardens and swales will be considered as a source for watering.

Relationships to other programs and organizations

There are many relationships to the Preserve that will continue to be fostered through the Master Plan. Both groups and individuals have created a variety of relationships with the Preserve. These relations fall into in the following areas: Natural Resources, Research, Education/ Stewardship, Direct and Indirect Partnership and Community Organizations and Volunteers.

Natural Resources

Fire management is recognized as a significant part of overall management of the Preserve. Fire management will be implemented in coordination with the Mohonk Preserve, The Nature Conservancy, the New York Department of Environmental Conservation (DEC), the New York Department of Transportation and the numerous fire departments that surround the Shawangunk Ridge. A ridge wide fire management strategy is being developed with these organizations and OPRHP.

Invasive species are one of the most serious threats to the Preserve's biodiversity. Cooperative management of roadside and Preserve-wide invasive species through the Preserve's Invasive Species Management Plan is important. The Preserve will continue developing and furthering relationships with managers of roadways and other easements. The Preserve will continue to work cooperatively with local and regional organizations, including the Lower Hudson Valley Partnership for Regional Invasives Management (LOHUD - PRISM), the Shawangunk Ridge Biodiversity Partnership (SRBP) and the Nature Conservancy (TNC), on these resource management issues.

Deer management is recognized as a serious threat to the biodiversity of the Preserve. OPRHP will coordinate deer management strategies with DEC and the SRBP to monitor impacts and identify strategies to reduce the impacts to the Preserve.

Research

Scientific and research organizations have long studied and contributed to the volume of knowledge available to the Preserve. Included in this group are the SRBP, TNC, State University of New York (SUNY), Biodiversity Research Institute (BRI), The Daniel Smiley Research Center, Mohonk Preserve and numerous fellows, students, professional researchers and interns. Research partnership opportunities will continue to be a part of the management of the Preserve.

Education/ Stewardship

Use of volunteers or members of conservation organizations has been an important part of the operation of the Preserve. They will continue to serve as resources to the Preserve manager and other staff. Local naturalists have long provided and are encouraged to continue providing their observations and volunteerism. School groups have taken part in trail building, invasive species management and will be encouraged to contribute and will be provided opportunity to engage in ongoing stewardship.

Partnerships

Partnerships will continue to be important in the development, management and operation of the Preserve. Agencies that the Preserve partners with informally include the Department of Corrections and the Department of Transportation for maintenance and invasive species actions. The Preserve partners with DEC for wildfire containment, wildlife management, and search and rescue operations.

The Preserve is an active and formal partner with the Shawangunk Ridge Biodiversity Partnership (SRBP) which preserves and protects the natural resources and wildlife habitat on the Shawangunk Ridge through research, monitoring, education and land management strategies. The SRBP works to sustain the long-term viability of native plants and animals and the integrity of ecosystems of the Shawangunk Ridge through implementation of the Partnership's comprehensive ridge-wide Protection and Management Guidelines. The stewardship initiatives of the Preserve remain consistent with the goals of the SRBP. The Nature Conservancy (TNC)/ Sam's Point Preserve, in addition to having a management agreement, also partner on biodiversity management strategies. These partnerships foster the preservation and protection of the natural resources, wildlife habitats and scenic beauty along the ridge while enhancing its biodiversity. These partnerships will remain and their efforts will continue.

Open space protection organizations such as the Open Space Institute (OSI) and the Trust for Public Lands (TPL) have played a significant role in acquisitions at the Preserve. Their efforts to preserve and protect open space along the Ridge are significant. Land preservation and protection remains a high priority for the Preserve and an active partnership with these organizations will continue.

Other organizations and not-for-profits that have contributed greatly to the Preserve include Shawangunk Ridge Coalition, Friends of the Shawangunks, Friends of the Palisades and the Mohonk Preserve. The Mohonk Preserve has contributed greatly to the research and protection of significant ecological communities throughout the Preserve, and has a memorandum of understanding with PIPC to undertake a carriage road restoration study and manage the Shawangunk Gateway Campground, when constructed. The efforts and results from these partnerships are recognized and greatly appreciated.

Community Organizations and Volunteers

Since the creation of the Preserve, many organization and volunteer contributions have enhanced the land in many ways. A broad spectrum of interests is represented. The Gunks Climbers Coalition, an

affiliate of the national Access Fund, has been very active in improving and maintaining the climbing area as part of the national Adopt-a-Crag effort. Coalition volunteers have assisted with research in the climbing area and development of the new climbing area, the Dickie Barre. The New York / New Jersey Trail Conference constructs and maintains footpaths throughout the Preserve. The Gunks Mountain Bike Association, Fats in the Cats Bicycle Club, Backcountry Patrol and Ski Patrol have all been involved with enhancing patron safety and reporting hazards that appear. Additionally, hundreds of individual volunteers have lead walks, performed research, managed invasive species and more. The Preserve greatly appreciates these relationships and looks forward to continued support from these and other groups and individuals.

Friends Group

Friends Groups, which are non-profit organizations, are sometimes formed to support the operations of OPRHP facilities. Currently there is no Friends Group at Minnewaska State Park Preserve. It is recommended that a Friends Group be created.

Sam's Point Preserve Master Plan Summary

The Minnewaska State Park Preserve Master Plan includes a summary of the Sam's Point Preserve Master Plan because the two Preserves share a unique relationship, being adjacent to each other and having similar goals. While the Master Plans were developed separately, each recommends similar strategies for biodiversity enhancements along the Shawangunk Ridge, based on the ecological goals developed by the Shawangunk Ridge Biodiversity Partnership.

Sam's Point Preserve lies within Ulster County, in the Town of Wawarsing and the Village of Ellenville. The almost 6,000 acre Preserve is comprised of two segments: 3,799 acres owned by the PIPC, which are adjacent to and part of Minnewaska State Park Preserve; and 1,080 acres at the entrance of the Preserve, owned by the Open Space Conservancy (OSC). Both portions of the Preserve are currently managed by The Nature Conservancy (TNC) under a management agreement with OSC and PIPC.

The landscape at Sam's Point is defined by the dramatic cliffs, talus and slab rock that are all part of the high, flat plateau that makes up the Preserve. The top of the plateau is dominated by unique dwarf pitch pine barrens and is considered one of the world's best examples of this globally rare plant community. The Preserve supports five rare plant communities (including the dwarf pitch pine barrens), eight rare plant and three rare animal species, and notably is an important refugium for the threatened Timber rattlesnake.

Sam's Point Preserve has a total of approximately sixteen miles of carriage roads and trails. Popular destinations for hikers include Lake Maratanza, Sam's Point, Indian Rock, High Point, the Ice Caves and Verkeerderkill Falls. The Long Path passes through Sam's Point Preserve connecting to Minnewaska State Park Preserve and continuing north through the Catskill mountains.

Sam's Point Preserve Mission

Sam's Point Preserve is home to an abundance of rare species and natural communities, including the globally rare ridge-top dwarf pitch pine barrens. The mission of the preserve is to use a science driven approach to protect:

- The biological diversity of the landscape, along with
- The wilderness character and spiritual quality it embodies, and
- The record of the relationship between these resources and human beings.

Ecological management is a key component to the mission and management at Sam's Point Preserve. Fire suppression, deer herbivory and invasive species are key threats to the ecological integrity of the natural communities.

Sam's Point Preserve Master Plan Highlights

The Sam's Point Preserve Master Plan addresses a variety of topics including public use policies, infrastructure, and a variety of ecological management issues such as fire management, invasive species control and deer management. The Sam's Point Preserve Master Plan public use policies are based on recreational management zones, and addresses both permitted and non-permitted uses. The Plan states that the recreational management zones will remain consistent with how Sam's Point Preserve is currently used. Permitted uses include hiking, hunting, skiing, snow-shoeing, environmental education and research. Non-permitted uses are camping, hang-gliding, mountain biking, rock and ice climbing, swimming and trapping, and the use of off-road vehicles, snowmobiles and horses. Some of the major infrastructural needs outlined in the Sam's Point Preserve Master Plan have been implemented including the Meg Stewart Conservation Center and restoration of the gatehouse. On-going restoration and maintenance of sixteen miles of carriage roads, the entrance roadways and the hiking trails is needed. The Plan states that most building needs have been met but additional storage and maintenance space may be required. Ecological management strategies were identified for fire management, deer management, and invasive species management. For a complete summary of the Sam's Point Preserve Master Plan see Appendix F.